

# Material Safety Data Sheet

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Propylene Glycol  
Synonyms: PG; Methyl ethylene glycol; 1,2-dihydroxypropane  
Description/Use: Solvent Carrier Intermediate  
Company Name: Lincoln Fine Ingredients  
Address: Lincoln RI 02865  
Phone Number: 401-722-2410 / Fax: 401-727-0752  
Emergency Number: Chemtrec 800-424-9300  
\*\*The chemtrec number is to be called only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

CAS or CHEMICAL NAME	CAS #	% Range
1,2 Propanediol	57-55-6	98 - 100

## 3. HAZARDS IDENTIFICATION

**OSHA Hazard Classification:** This product is not considered to be hazardous under OSHA 29 CFR 1910.1200.

Routes of Entry: Ingestion  
Chemical Interactions: No known interactions  
Medical Conditions Aggravated: None known or reported

### Human Threshold Response Data

Odor Threshold: Not established  
Irritation Threshold: Not established

### Hazardous Materials Identification System/National Fire Protection Association Classifications

Hazard Ratings:	Health	Flammability	Reactivity
HMIS	0	1	0
NFPA	0	1	0

### Immediate (Acute) Health Effects

Inhalation Toxicity: Because of its low volatility, exposure to vapors is unlikely and no significant adverse effects to health will occur from inhalation. However, the inhalation of hot vapors or mist may cause nausea and respiratory tract irritation.

Inhalation Irritation: May cause transient irritation if inhaled as an aerosol.

Skin Contact: Contact would be expected to cause transient redness if not washed off and left on the skin for an extended period of time.

Skin Absorption: Not expected to be absorbed through the skin.

Eye Contact: Contact would be expected to cause transient redness if not washed out and left in the eye for an extended period of time. No corneal involvement or visual impairment is expected.

Ingestion Irritation: Ingestion may cause irritation of the gastrointestinal tract and gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting, lethargy or diarrhea.

Ingestion Toxicity: Not expected to be toxic by ingestion.

Acute Target Organ Toxicity: None known

### Prolonged (Chronic) Health Effects

Carcinogenicity:	This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.
Reproductive and Developmental Toxicity:	Not known or reported to cause reproductive or developmental toxicity.
Inhalation:	There are no known or reported effects from chronic exposure except for effects similar to those experienced from acute exposure.
Skin Contact:	There are no known or reported effects from chronic exposure except for effects (if any) similar to those experienced from acute exposure.
Ingestion:	There are no known or reported effects from chronic ingestion except for effects similar to those experienced from single exposure.
Chronic Target Organ Toxicity:	None known or reported
Supplemental Health Hazard Information:	No additional health information available.

### **4. FIRST AID MEASURES**

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Inhalation:	IF INHALED: Remove individual to fresh air.
Skin Contact:	IF ON SKIN: Flush skin with water for 15 minutes. Call a physician if irritation develops.
Eyes:	IF IN EYES: Flush eyes with plenty of water for at least 15 minutes. Call a physician if irritation develops.
Ingestion:	IF SWALLOWED: Immediately drink water to dilute. Consult a physician if symptoms develop. Never give anything by mouth to an unconscious person.

### **5. FIRE FIGHTING MEASURES**

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Flammability Summary (OSHA):	Product is not known to be flammable, combustible, pyrophoric or explosive.
<u>Flammable Properties</u>	
Flash Point:	107 Deg. C. / 225 Deg. F. (Test Method: Cleveland Closed Cup)
Autoignition Temperature:	371 Deg. C. / 700 Deg. F.
Upper Flammable/Explosive Limit, % in air:	12.5 %
Lower Flammable/Explosive Limit, % in air:	2.6 %
Fire/Explosion Hazards:	Material may be ignited only if preheated to high temperatures, for example in a fire.
Extinguishing Media:	Use alcohol foam, carbon dioxide, dry chemical or water spray when fighting fires. Water or foam may cause frothing if liquid solvent or oil is burning but it still may be a useful extinguishing agent if carefully applied to the fire.
Fire Fighting Instructions:	In case of fire, use normal fire fighting equipment including a NIOSH approved self-contained breathing apparatus (SCBA). Use water to cool containers.
Hazardous Combustion Products:	carbon dioxide, carbon monoxide

### **6. ACCIDENTAL RELEASE MEASURES**

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Personal Protection for Emergency Situations:	No extra protection required beyond that listed in Section 8. In case of fire, use normal fire fighting equipment.
<u>Spill Mitigation Procedures</u>	
Air Release:	Vapors may be suppressed by the use of water fog. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste.
Water Release:	This material is heavier than water. This material is soluble in water. Divert water flow around spill if possible and safe to do so. Notify all downstream users of possible contamination. Continue to handle as described in land spill.
Land Release:	Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Decontaminate all clothing and the spill area using a detergent and flush with large amounts of water. Contain all contaminated water for disposal and/or treatment.
Additional Spill Information:	Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration.

## 7. HANDLING AND STORAGE

Handling: Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing mist or vapor.

Storage: Store in a cool, dry and well ventilated place. Isolate from incompatible materials.

Shelf Life Limitations: See label or certificate of analysis for shelf life if applicable.

Incompatible Materials for Storage: Refer to Section 10, "Incompatible Materials."

Do Not Store At temperatures Above: 49 Deg. C. 120 Deg. F.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation: Local exhaust ventilation is recommended if vapors, mists or aerosols are generated. Otherwise, use general exhaust ventilation.

### Protective Equipment for Routine Use of Product

Respiratory Protection: Respiratory protection not normally needed since volatility and toxicity are low. If vapors, mists or aerosols are generated, wear a NIOSH approved respirator.

Respirator Type(s): NIOSH approved air purifying respirator with organic vapor cartridge and dust/mist filter. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin: Wear impervious gloves to avoid skin contact. Follow good industrial hygiene practices.

Eyes: Use chemical goggles.

Protective Clothing Type: Neoprene, Nitrile, A PE/EVAL (a film laminate of polyethylene and ethylene vinyl alcohol copolymer) type material such as 4H.

### Exposure Limit Data

CHEMICAL NAME	CAS #	OSHA PEL / STEL	ACGIH LIMITS	AIHA WEEL
1,2-Propylene glycol	57-55-6	None established	None established	50 ppm TWA (total); 10 mg/m3 TWA (aerosol only)

CHEMICAL NAME NIOSH Immediately Dangerous to Life or Health:  
The IDLH has not been established for this product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: clear liquid

Color: colorless

Odor: mild

Molecular Weight: 76.1

pH: (@ 25 Deg. C) Not applicable

Octanol/Water Coeff: No data

Solubility in Water: Completely miscible

Bulk Density: 8.66 lb/gal

Specific Gravity: 1.04

Vapor Density: 2.62

Vapor Pressure: (@ 25 Deg. C) < 0.1 mmHg

Evaporation Rate: No data

Boiling Point: 187.4

Freezing Point: 369 Deg. F.  
-60 Deg. C.  
-76 Deg. F.

Volatiles, % by vol.: No data

VOC Content %w/w / lbs/gal: 99.00 / 8.58

HAP Content %w/w / lbs/gal: 0.00 / 0.00

## 10. STABILITY AND REACTIVITY

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Stability and Reactivity Summary: Stable under normal conditions. Not sensitive to mechanical shock.  
Reactive Properties: Product is not sensitive to electrical static discharge.  
Hazardous Polymerization: Will not occur  
Conditions to Avoid: High temperatures  
Chemical Incompatibility: strong oxidizing agents  
Hazardous Decomposition Products: carbon dioxide, carbon monoxide  
Decomposition Temperature: No data  
Product May Be Unstable At Temperatures Above: 218 Deg. C. 425 Deg. F.

## 11. TOXICOLOGICAL INFORMATION

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### Component Animal Toxicology

Oral LD50 value:  
1,2 Propanediol Oral LD50: Rat > 5 g/kg  
Dermal LD50 value:  
1,2 Propanediol Dermal LD50 Rabbit > 2 g/kg  
Inhalation LC50 value: No data

### Product Animal Toxicity:

Oral LD50 value: Rat > 5 g/kg  
Dermal LD50 value: Rabbit > 2 g/kg  
Inhalation LC50 value: No data  
Skin Irritation: This material is expected to be slightly irritating.  
Eye Irritation: This material is expected to be slightly irritating.

Reproductive and Developmental Toxicity: Not known or reported to cause reproductive or developmental toxicity.

### Component Data:

1,2 Propanediol This chemical has been tested in laboratory animals and no evidence of teratogenicity, embryotoxicity or fetotoxicity was seen.

### Mutagenicity:

Component Data: Not known or reported to be mutagenic.

1,2 Propanediol This material has been shown not to be mutagenic based on a battery of assays.

### Carcinogenicity:

This chemical is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

### Component Data:

1,2 Propanediol The carcinogenicity has been evaluated through animal study and it was found not to be carcinogenic.

## 12. ECOLOGICAL INFORMATION

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### Ecological Toxicity Values:

1,2 Propanediol Goldfish 24 hr. LC50: > 5000 mg/l (measured, static).  
Rainbow trout (*Salmo gairdneri*) Lethal Dose (24 hr. exposure) > 50000 mg/l (nominal, static).  
Brine shrimp 24 hr. LC50: > 10000 mg/l (nominal, static).  
Daphnia magna, 48 hr. EC50: > 10000 mg/l (nominal, static).



### 13. DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THIS MATERIAL. THE USER OF THIS MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary: If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D.

Potential US EPA Waste Codes: Not applicable

Disposal Methods: As a nonhazardous waste, it should be disposed of in accordance with local, state and federal regulations.

Components subject to land ban restrictions: No components subject to land ban restrictions.

### 14. TRANSPORT INFORMATION

THIS MATERIAL IS NOT REGULATED AS A DOT HAZARDOUS MATERIAL.

DOT Description (49 CFR 172.101):

Land (U.S. DOT): NOT REGULATED

Air (IATA/ICAO): Not Regulated

Water (IMO): Not Regulated

Flash Point: (C) Not Applicable

### 15. REGULATORY INFORMATION

UNITED STATES:

Toxic Substances Control Act (TSCA): The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

Pesticide acceptance indication: US EPA Registration Number: Not applicable

Superfund Amendments and Reauthorization Act (SARA) Title III:

Hazard Categories Sections 311/312 (40 CFR 370.2):

Health: None

Physical: None

Emergency Planning & Community Right to Know (40 CFR 355, App. A):

Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:

Not applicable

Reportable Quantity (40 CFR 302.4):

None listed

Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components

No 313-listed chemicals in this product

Clean Air Act Socmi:

Propylene glycol

Clean Air Act VOC Section 111

Propylene glycol

State Right-to-Know Regulations Status of Ingredients

Pennsylvania: 1,2-Propanediol

New Jersey: Not listed

Massachusetts: Not listed